

CLAIMS

What is claimed is:

1. A programming platform for generating parts programs for a machine tool or production machine, comprising:
 - an interpreter adapted to receive an instruction from a user;
 - a simulator that simulates an effect of the instruction;
 - a display for graphically displaying to the user the effect of the instruction in form of a two-dimensional or three-dimensional representation; and
 - a collision monitor for monitoring the effect of the instruction with respect to a collision between at least two components selected from the group consisting of machine elements, workpieces and tools.
2. The programming platform of claim 1, wherein the instruction includes an instruction marked by the user or a program segment of the parts program.
3. The programming platform of claim 1, wherein the interpreter automatically expands a syntax of an instruction inputted by the user in form of individual characters so as to form a meaningful syntax character sequence if said inputted syntax is unambiguous, or presents the user with at least one possible syntax character sequence to make a selection if said inputted syntax is ambiguous.

4. The programming platform of claim 3, wherein the interpreter checks the syntax of the instruction each time an instruction is entered by the user.
5. The programming platform of claim 1, wherein if the collision monitor identifies a collision, a machine movement corresponding to the identified collision is highlighted on the display, and the instruction or instructions causing the collision are displayed on the display in ASCII code and/or by graphically displaying an associated processing step.
6. The programming platform of claim 1, wherein the programming platform is selected from the group consisting of a stand-alone system, an online system implemented directly on the machine tool or production machine, and a server system in a networked environment.
7. The programming platform of claim 1, wherein at least one of the interpreter, simulator and collision monitor are integrated in the programming platform.
8. The programming platform of claim 1, wherein the programming platform includes a monitor operating mode wherein an actual view of the machine is graphically displayed during a production process.

9. A method for generating parts program for a machine tool or production machine, comprising the steps of:
 - inputting an instruction into an interpreter integrated in a programming platform;
 - simulating an effect of the instruction with a simulator integrated into the programming platform;
 - graphically displaying the effect of the instruction to a user form in form of a two-dimensional and/or three-dimensional representation; and
 - monitoring with a collision monitor that is integrated in the programming platform the effect of the instruction with respect to a collision between at least two components selected from the group consisting of machine elements, workpieces and tools.
10. The method of claim 9, further comprising marking the instruction or a program segment of the parts program.
11. The method of claim 9, further comprising expanding a syntax of an instruction that is inputted in form of individual characters so as to form a meaningful syntax character sequence if said inputted syntax is unambiguous, or presenting the user with at least one possible syntax character sequence to aid the user in making a selection if said inputted syntax is ambiguous.

12. The method of claim 11, and further comprising checking the syntax of the instruction each time an instruction is entered by the user.
13. The method of claim 9, and further comprising highlighting and displaying a machine movement corresponding to an identified collision, and displaying the instruction causing the identified collision in ASCII code or displaying a processing step corresponding to the identified collision.
14. The method of claim 9, and further comprising graphically displaying an actual view of the machine during a production process.